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YEARLING LONGLEAF SURVIVES A WILDFIRE

Seventy percent of a direct-seeded longleaf pine stand on a good site in Evangeline Parish, Louisiana, survived a wildfire when one year old.

On January 10, 1957, a fast-moving headfire swept across 320 acres of open land that had been seeded by the Hillyer-Deutsch-Edwards Lumber Company in November 1955. The fire, burning in an ungrazed 2-year-old grass rough, was fanned by a 15 m.p.h. northeast wind. Fire danger was high: a class 4 day on the type 8 meter.

The year-old seedlings averaged $7/32$ inch in diameter, ranging from $3/32$ to $13/32$ inch. In February, mortality from the fire averaged 30%. Only 5% of the seedlings $7/32$ inch or larger were dead, but 62% of the smaller ones had succumbed. By September, after a wet summer, the record was about the same--a few seedlings that looked dead in February had recovered, but an equal number with weak basal sprouts had died.

It appears that in favorable seasons yearling longleaf pines can reach a size that enables them to survive some accidental fires.--Jacques Jorgensen and H. J. Derr.

SITE PREPARATION ON FLORIDA SANDHILLS

West Florida's deep sands will grow pines very satisfactorily, but best performance can be expected only when oaks and wiregrass are removed with a minimum of soil displacement.

After two growing seasons, slash pine seedlings planted on plots chopped twice with an 11-ton Marden double-drum brush chopper averaged 3.4 feet high. They were a foot taller and more uniform in height and color than seedlings on plots receiving the second-best site treatment--scalping with a modified rootrake and then disking.

Chopping once with the double-drum chopper or rootraking without disking afterwards did not remove enough scrub oaks and wiregrass. Clearing with a single pass of a big snowplow-like brush cutter (known as a BSW) was also less satisfactory, possibly because it removed too much of the topsoil. On uncleared plots height growth was about one-third that on the double-chopped treatment. Survival on double-chopped plots averaged 83%. Two passes with the BSW plow provided highest survival (86%) but poorest height growth. Survival on uncleared plots averaged 60%. --
Harold E. Grelen.

COST OF PRUNING LOBLOLLY AND SHORTLEAF

A study in north Mississippi pine plantations determined that 17-year-old loblolly pines could be pruned to a height of 17 feet for 11 cents per tree; 23-year-old shortleaf pines cost 7 cents apiece to prune, chiefly because they had fewer and smaller limbs than the loblolly.

Selected trees were pruned first to 10 feet with a pruning saw on a 4-foot handle, then to 17 feet with a saw on a 10- to 12-foot handle. For loblolly, 10-foot pruning required 1.8 minutes per tree, and 17-foot pruning took 5.1 minutes. For shortleaf, corresponding figures were 1.3 minutes and 3.5 minutes. Pruning costs were computed using an hourly wage of \$1 plus \$0.29 per hour for supervision and overhead.

The following regressions show how d. b. h. in inches (D) and number of limbs pruned (N) affected the time in minutes (T) required for pruning.

Loblolly, to 17 feet:

$$T=6.4 - 1.4D + .16D^2 + .09N$$

Loblolly, to 10 feet:

$$T=3.7 - 7.3D + .06D^2 + .06N$$

Shortleaf, to 17 feet:

$$T=.13 - .12D + .22N \text{ or } T=4.4 - .15D$$

Shortleaf, to 10 feet:

$$T=.9 - .77D + .008D^2 + .14N$$

Walking time and all other delay time were evenly distributed between all pruned trees and are included in the constant term of each formula.--
H. L. Williston.

VIRGINIA PINE SEEDED IN TENNESSEE

In a recent test on central Tennessee's Cumberland Plateau, sowing repellent-treated Virginia pine seed in plowed furrows produced an excellent stand of seedlings after one growing season.

The seed had been kept in dry cold storage for one year. After being stratified in moist sand for

35 days at 34° to 38° F. it was coated with a bird, rodent, and insect repellent containing thiram and Endrin (5.6 pounds Arasan 75 and 0.8 pound Endrin 50 per 100 pounds of seed).

Early in April 1957 the treated seed was sown by the Hiwassee Land Company in fire-plow furrows spaced 6 feet apart throughout 5 acres of poorly stocked, low-grade upland hardwoods. The men doing the seeding walked down the furrows, dropping a small "pinch" of seed every other step. About 15,000 seeds were sown per acre, of which 11,000 were classed as full or sound. No untreated seed was used.

Field germination of the treated full seed was about 74%--almost identical with laboratory germination. By late November, survival of the germinated seedlings was 91%, and 98% of all mil-acres were stocked. Rains have washed soil into the furrows, but the seedlings seem to keep ahead of the silting. Now that the pines are established, they will have to be released from the cull hardwoods. -- T. A. Harrington.

RECENT PUBLICATIONS

- *Avery, G. *Slotted clip board for viewing aerial photos.* Minnesota Forestry Notes 63, 2 pp.
- Grosenbaugh, L. R. *Opportunities through research.* Forest Farmer, March 1958, pp. 11, 22, 24.
- *Grosenbaugh, L.R. *The elusive formula of best fit: a comprehensive new machine program.* Occasional Paper 158, 9 pp.
- *Grano, C. X. *How to recognize good seed trees.* Forest Farmer, January 1958, p. 13.
- *Grano, C.X. *Response of southern red oak to seasonal applications of 2,4,5-T.* Journal of Forestry, February 1958, pp. 140-141.
- Koshi, P. T. *Diameter growth of post oak best in sparse stands.* Journal of Forestry, November 1957, p. 847.
- Thames, J.L., and Ursic, S.J. *Improved rain gage supports.* Journal of Soil and Water Conservation, November 1957, p. 283.

*Copies are available at the Southern Station.